

Mathematikaufgaben

> Algebra

> Bruchrechnung

Aufgabe: Führe die Addition oder Subtraktion von zwei Brüchen durch:

a) $\frac{1}{8} + \frac{4}{8} = ?$

b) $\frac{4}{5} - \frac{1}{5} = ?$

c) $\frac{7}{9} - \frac{5}{9} = ?$

d) $\frac{5}{12} + \frac{1}{12} = ?$

e) $\frac{4}{15} + \frac{2}{15} = ?$

f) $\frac{4}{11} + \frac{7}{11} = ?$

g) $\frac{15}{16} - \frac{3}{16} = ?$

h) $\frac{9}{14} + \frac{11}{14} = ?$

i) $\frac{8}{21} + \frac{16}{21} = ?$

j) $\frac{2}{3} + \frac{1}{4} = ?$

k) $\frac{5}{8} - \frac{1}{10} = ?$

l) $\frac{5}{6} + \frac{3}{8} = ?$

m) $\frac{4}{5} - \frac{2}{3} = ?$

n) $\frac{1}{4} + \frac{1}{6} = ?$

o) $\frac{1}{7} - \frac{1}{12} = ?$

p) $\frac{3}{4} - \frac{1}{5} = ?$

q) $\frac{7}{8} - \frac{1}{6} = ?$

r) $\frac{2}{3} + \frac{1}{2} = ?$

s) $\frac{5}{11} - \frac{1}{6} = ?$

t) $\frac{12}{13} + \frac{5}{6} = ?$

Lösungen: Anwendung der Bruchgesetze (Kürzen der Brüche, Umwandlung von gemischten in reine Brüche, Erweitern von Brüchen, Addition/Subtraktion gleichnamiger Brüche, Kürzen des Ergebnisbruchs, Umwandlung von reinem in gemischtem Bruch) führt auf die folgenden Ergebnisse:

$$a) \frac{1}{8} + \frac{4}{8} = \frac{1}{8} + \frac{1}{2} = \frac{1}{8} + \frac{4}{8} = \frac{5}{8}$$

$$b) \frac{4}{5} - \frac{1}{5} = \frac{3}{5}$$

$$c) \frac{7}{9} - \frac{5}{9} = \frac{2}{9}$$

$$d) \frac{5}{12} + \frac{1}{12} = \frac{6}{12} = \frac{1}{2}$$

$$e) \frac{4}{15} + \frac{2}{15} = \frac{6}{15} = \frac{2}{5}$$

$$f) \frac{4}{11} + \frac{7}{11} = \frac{11}{11} = \frac{1}{1} = 1$$

$$g) \frac{15}{16} - \frac{3}{16} = \frac{12}{16} = \frac{3}{4}$$

$$h) \frac{9}{14} + \frac{11}{14} = \frac{20}{14} = \frac{10}{7} = 1\frac{3}{7}$$

$$i) \frac{8}{21} + \frac{16}{21} = \frac{24}{21} = \frac{8}{7} = 1\frac{1}{7}$$

$$j) \frac{2}{3} + \frac{1}{4} = \frac{8}{12} + \frac{3}{12} = \frac{11}{12}$$

$$k) \frac{5}{8} - \frac{1}{10} = \frac{25}{40} - \frac{4}{40} = \frac{21}{40}$$

$$l) \frac{5}{6} + \frac{3}{8} = \frac{20}{24} + \frac{9}{24} = \frac{29}{24} = 1\frac{5}{24}$$

$$m) \frac{4}{5} - \frac{2}{3} = \frac{12}{15} - \frac{10}{15} = \frac{2}{15}$$

$$n) \frac{1}{4} + \frac{1}{6} = \frac{3}{12} + \frac{2}{12} = \frac{5}{12}$$

$$o) \frac{1}{7} - \frac{1}{12} = \frac{12}{84} - \frac{7}{84} = \frac{5}{84}$$

$$p) \frac{3}{4} - \frac{1}{5} = \frac{15}{20} - \frac{4}{20} = \frac{11}{20}$$

$$q) \frac{7}{8} - \frac{1}{6} = \frac{21}{24} - \frac{4}{24} = \frac{17}{24}$$

$$r) \frac{2}{3} + \frac{1}{2} = \frac{4}{6} + \frac{3}{6} = \frac{7}{6} = 1\frac{1}{6}$$

$$s) \frac{5}{11} - \frac{1}{6} = \frac{30}{66} - \frac{11}{66} = \frac{19}{66}$$

$$t) \frac{12}{13} + \frac{5}{6} = \frac{72}{78} + \frac{65}{78} = \frac{137}{78} = 1\frac{59}{78}$$